

REMARKS

The Office Action dated October 2, 2007 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 23 and 28-44 have been amended to more particularly point out and distinctly claim the subject matter of the invention. Claims 24 and 26 have been canceled without prejudice or disclaimer. New claims 45 and 46 have been added. No new matter has been added. Claims 23, 25, and 27-46 are currently pending in the application and are respectfully submitted for consideration.

The Office Action rejected claims 23-44 under 35 U.S.C. §103(a) as being unpatentable over 3GPP Technical Specification (3GPP TS 32.225 V1.5.0, hereinafter “3GPP”) in view of Lynch-Aird (U.S. Patent No. 6,240,402). The Office Action took the position that 3GPP discloses all of the elements of the claims, with the exception of “transferring sponsorship information to a charging system (i.e., allocating billing or charging to a party or a third party for the requested call)” (Office Action, page 2). The Office Action then cited Lynch-Aird as allegedly curing this deficiency in 3GPP. This rejection is respectfully traversed for at least the following reasons.

Claim 23, upon which claims 25 and 27-31 are dependent, recites a method including receiving a request to establish an internet protocol (IP) session from a user of a communication system supporting a diameter IP protocol. The method further includes

initiating an account with an account controller of the system, wherein the initiating comprises transferring sponsorship information to a charging system from an application server, said sponsorship information being provided to enable shared charging, the charging system being responsible for monitoring of the account. The method continues by establishing the IP session, and initiating the monitoring of the account responsive to an account request message from said account controller to obtain a final tariff.

Claim 32, upon which claims 33-42 are dependent, recites a communication system including a control function configured to initiate an internet protocol (IP) session for a user of the system, wherein the system supports a diameter IP protocol. The communication system also includes an application server configured to provide an application for a user of the system in an IP session, an account controller configured to initiate an account, and a charging unit configured to charge an IP session for a user. The charging unit is configured to receive sponsorship information to enable shared charging from the application server on initiation of the account, and is configured to monitor the account responsive to an account request message from said control function to obtain a final tariff.

Claim 43, upon which claim 44 is dependent, recites a diameter IP protocol configured to define at least one attribute value pair to define sponsorship information.

Claim 45 recites an apparatus comprising a receiver configured to receive a request to establish an internet protocol (IP) session from a user of a communication system supporting a diameter IP protocol, and an initiating unit configured to initiate an

account with an account controller of the system. The initiating comprises transferring sponsorship information to enable shared charging from the application to a charging system, the charging system being responsible for monitoring of the account. The apparatus also includes an establishing unit configured to establish the IP session and to send an account request message to obtain a final tariff to a charging system, thereby to initiate the monitoring of the account.

Claim 46 recites an apparatus comprising receiving means for receiving a request to establish an internet protocol (IP) session from a user of a communication system supporting a diameter IP protocol, and initiating means for initiating an account with an account controller of the system. The initiating means comprises means for transferring sponsorship information to enable shared charging from an application server to a charging system, the charging system being responsible for monitoring of the account. The apparatus further includes establishing means for establishing the IP session, and sending means for sending an account request message to obtain a final tariff to a charging system, thereby to initiate the monitoring of the account.

Thus, embodiments of the invention, introduce shared charging information into the Diameter protocol. As a result, the invention advantageously provides an enhancement to the Diameter charging capability, and provides a mechanism for effective sponsorship in all-IP networks.

As will be discussed below, the cited prior art fails to disclose or suggest all of the elements of the claims, and therefore fails to provide the advantages and features discussed above.

3GPP discloses use of the diameter protocol for online charging in addition to offline charging. The online charging protocol may include additional attribute value pairs. 3GPP teaches a type of online event charging known as immediate event charging that takes place when a calling party attempts to establish a connection with a called party. The signaling disclosed includes an application server receiving an invite request from a S-CSCF, and sending an accounting request to an event charging function (ECF). The ECF deducts an appropriate amount from the calling party's account. The ECF then authorizes service execution by the application server. Service signaling then takes place between the parties involved for the session to be established and for service delivered.

Lynch-Aird discloses a communication network comprising at least two user access points, a communication medium through which communications between user access points pass, and a communication monitoring point in the medium. Each user may be allocated a plurality of user identifiers associated with respective predetermined charging schemes, and the network is arranged to accept communications including user identifiers in each of a destination identifier field and a source identifier field. The communication monitoring point monitors user identifiers in a communication to determine the charging scheme.

Applicants respectfully submit that the combination of 3GPP and Lynch-Aird fails to disclose or suggest all of the elements of the present claims. For example, 3GPP and Lynch-Aird do not disclose or suggest “initiating an account with an account controller of the system, wherein the initiating comprises transferring sponsorship information to a charging system from an application server, said sponsorship information being provided to enable shared charging, the charging system being responsible for monitoring of the account,” and “initiating the monitoring of the account responsive to an account request message from said account controller to obtain a final tariff,” as recited in claim 23.

The combination of 3GPP and Lynch-Aird similarly does not disclose or suggest “a charging unit configured to charge an IP session for a user, wherein the charging unit is configured to receive sponsorship information to enable shared charging from the application server on initiation of the account, and is configured to monitor the account responsive to an account request message from said control function to obtain a final tariff,” as recited in claim 32. 3GPP and Lynch-Aird also fail to disclose or suggest initiating “an account with an account controller of the system, wherein the initiating comprises transferring sponsorship information to enable shared charging from the application to a charging system, the charging system being responsible for monitoring of the account,” and sending “an account request message to obtain a final tariff to a charging system, thereby to initiate the monitoring of the account,” as recited in claim 45 and similarly recited in claim 46.

3GPP fails to mention or suggest the transfer of such sponsorship information to enable shared charging. As mentioned above, embodiments of the invention are able to accommodate sponsorship in charging mechanisms in relation to implementations of all-IP networks, which was an accommodation lacking in the prior art. 3GPP merely provides an example of charging mechanisms in an all-IP network without any accommodation for sponsorship. Accordingly, 3GPP fails to disclose or suggest transferring sponsorship information to enable shared charging, as recited in the present claims.

Lynch-Aird does not cure these deficiencies in 3GPP. According to Lynch-Aird, information about shared charging may be stored by the network operator indexed against a recipient identifier. The claimed invention differs from Lynch-Aird in that sponsorship information is transferred to a charging system from an application server. This advantageously means that shared charging information does not have to be provided to the network operator before the application server takes part in a session. Lynch-Aird does not disclose such a transfer of sponsorship information.

Therefore, Applicants respectfully submit that the combination of 3GPP and Lynch-Aird fails to disclose or suggest “initiating an account with an account controller of the system, wherein the initiating comprises transferring sponsorship information to a charging system from an application server, said sponsorship information being provided to enable shared charging, the charging system being responsible for monitoring of the account,” and “initiating the monitoring of the account responsive to an account request

message from said account controller to obtain a final tariff,” as recited in claim 23 and the similar limitations recited in claims 32, 45, and 46.

Furthermore, the combination of 3GPP and Lynch-Aird does not disclose or suggest a “diameter internet protocol configured to define at least one attribute value pair to define sponsorship information,” as recited in claim 43. The Office Action took the position that Lynch-Aird discloses this element of the claims (Office Action, page 3). Lynch-Aird, however, makes no mention of the Diameter protocol or of IP networks in general. Accordingly, Lynch-Aird cannot disclose or suggest a “diameter internet protocol configured to define at least one attribute value pair to define sponsorship information.” Therefore, the combination of 3GPP and Lynch-Aird does not disclose or suggest all of the elements of claim 43.

Additionally, Applicants respectfully submit that a person of ordinary skill in the art would not have been motivated to combine 3GPP with Lynch-Aird. In particular, Lynch-Aird is directed to charging schemes for calls between an originator and a recipient, where “charges are allocated to one or more of the originator, the recipient and a third party” (Lynch-Aird, Column 5, lines 21-23). However, as discussed above, Lynch-Aird makes no mention of the Diameter IP protocol or even IP networks in general. As such, a person of skill in the art attempting to solve a problem regarding charging information in a Diameter protocol would not be motivated to consult Lynch-Aird.

In any case, even if a person of skill in the art would have been motivated to combine 3GPP with Lynch-Aird, which is clearly not admitted, the combination of documents would still not disclose or suggest all of the elements of the claims as discussed above.

Claims 25, 27-31, 33-42, and 44 are dependent upon claims 23, 32, and 43, respectively. As such, claims 25, 27-31, 33-42, and 44 should be allowed for at least their dependence upon claims 23, 32, and 43, respectively, and for the specific limitations recited therein.

Applicants respectfully submit that 3GPP and Lynch-Aird, whether viewed individually or combined, fail to disclose or suggest all of the elements of the claimed invention. These distinctions are more than sufficient to render the claimed invention unanticipated and unobvious. It is therefore respectfully requested that all of claims 23, 25, and 27-46 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosures: Petition for Extension of Time